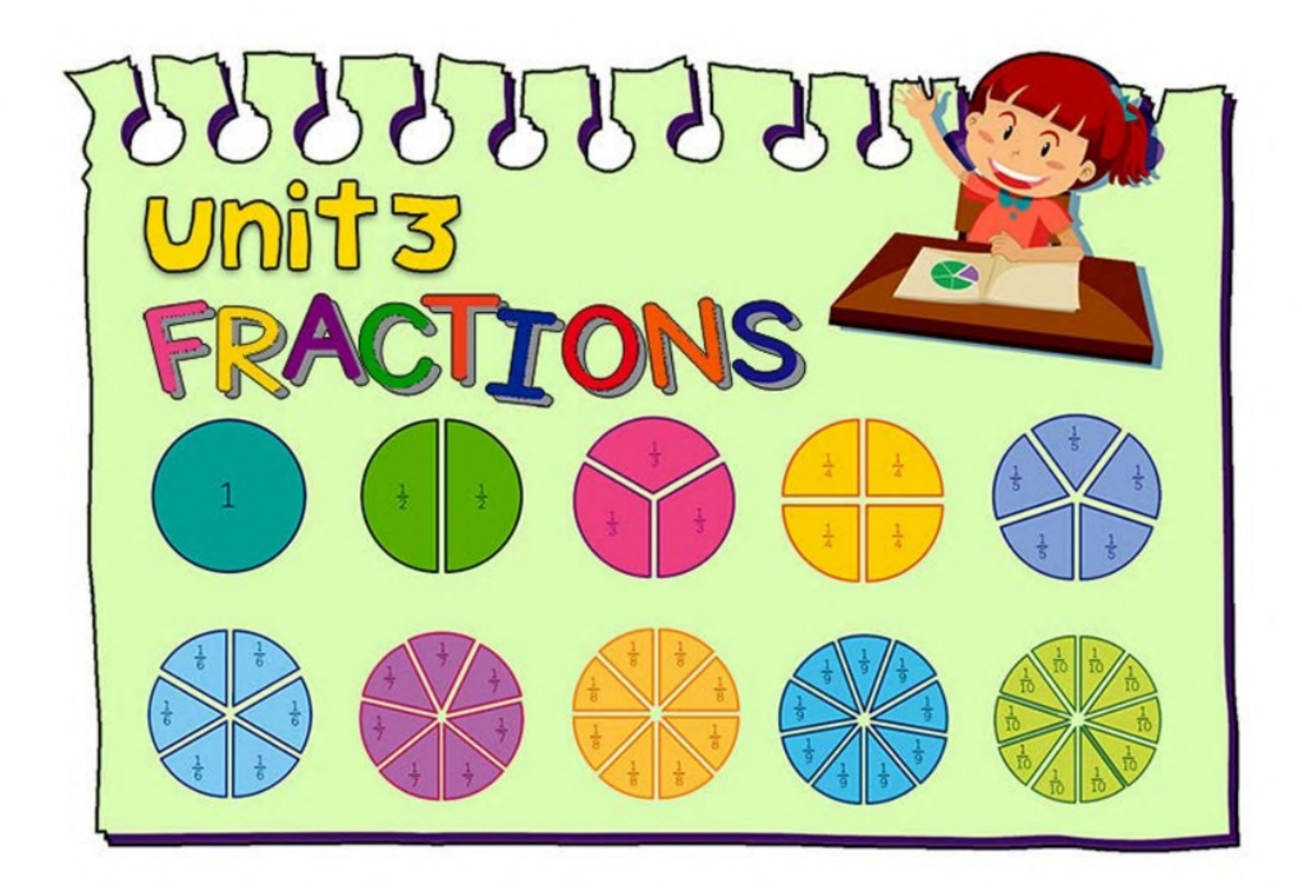


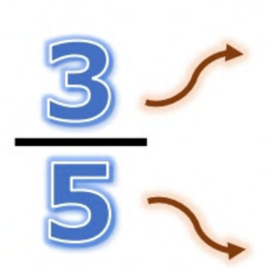

Unit 3
FRACTIONS





The Meaning & Reading of Fractions

FOR EXAMPLE



The numerator is the top number and it's the no. of shaded parts.

The denominator is the bottom number and it's the no. of all parts.



1	1 whole
$\frac{1}{2}$ $\frac{1}{2}$	1 whole = 2 halves $(\frac{2}{2})$
$\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$	1 whole = 3 thirds $(\frac{3}{3})$
$\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$	1 whole = 4 quarters $(\frac{4}{4})$
$\frac{1}{5}$ $\frac{1}{5}$ $\frac{1}{5}$ $\frac{1}{5}$ $\frac{1}{5}$	1 whole = 5 fifths $(\frac{5}{5})$
$\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$	1 whole = 6 sixths $(\frac{6}{6})$
$\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$	1 whole = 7 sevenths $(\frac{7}{7})$
$\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$	1 whole = 8 eighths $(\frac{8}{8})$
$\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$	1 whole = 9 ninths $(\frac{9}{9})$
$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	1 whole = 10 tenths $(\frac{10}{10})$

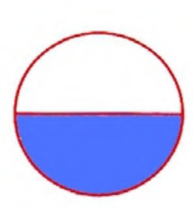
$$1 = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \frac{5}{5} = \frac{6}{6} = \frac{7}{7} = \frac{8}{8} = \frac{9}{9} = \frac{10}{10} = \cdots$$



Reading fractions

- **Study the fractions which represent the coloured part below :**

1 part of 2 equal parts



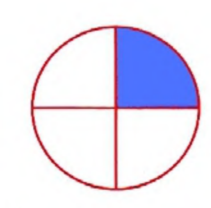
$\frac{1}{2}$ it is read as (half)

1 part of 3 equal parts



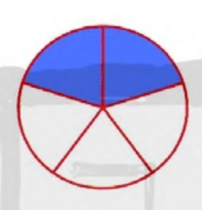
$\frac{1}{3}$ it is read as (third)

1 part of 4 equal parts



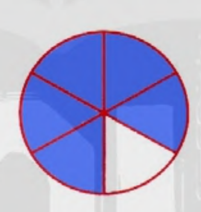
$\frac{1}{4}$ it is read as (fourth or quarter)

2 parts of 5 equal parts



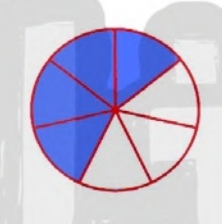
$\frac{2}{5}$ it is read as (two fifths)

5 parts of 6 equal parts



$\frac{5}{6}$ it is read as (five sixths)

4 parts of 7 equal parts



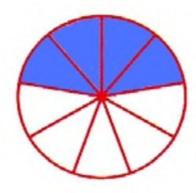
$\frac{4}{7}$ it is read as (four sevenths)

3 parts of 8 equal parts



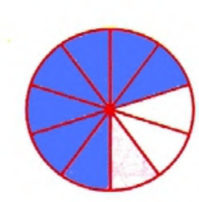
$\frac{3}{8}$ it is read as (three eighths)

4 parts of 9 equal parts



$\frac{4}{9}$ it is read as (four ninths)

7 parts of 10 equal parts

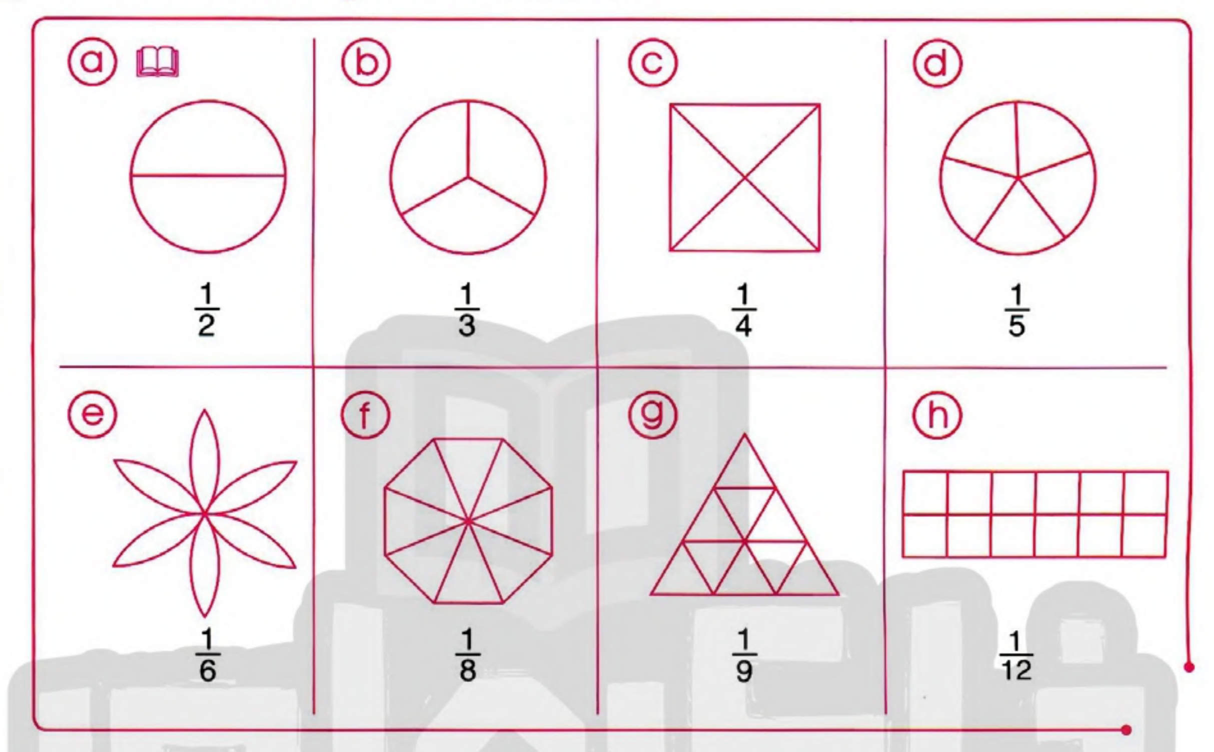


$\frac{7}{10}$ it is read as (seven tenths)

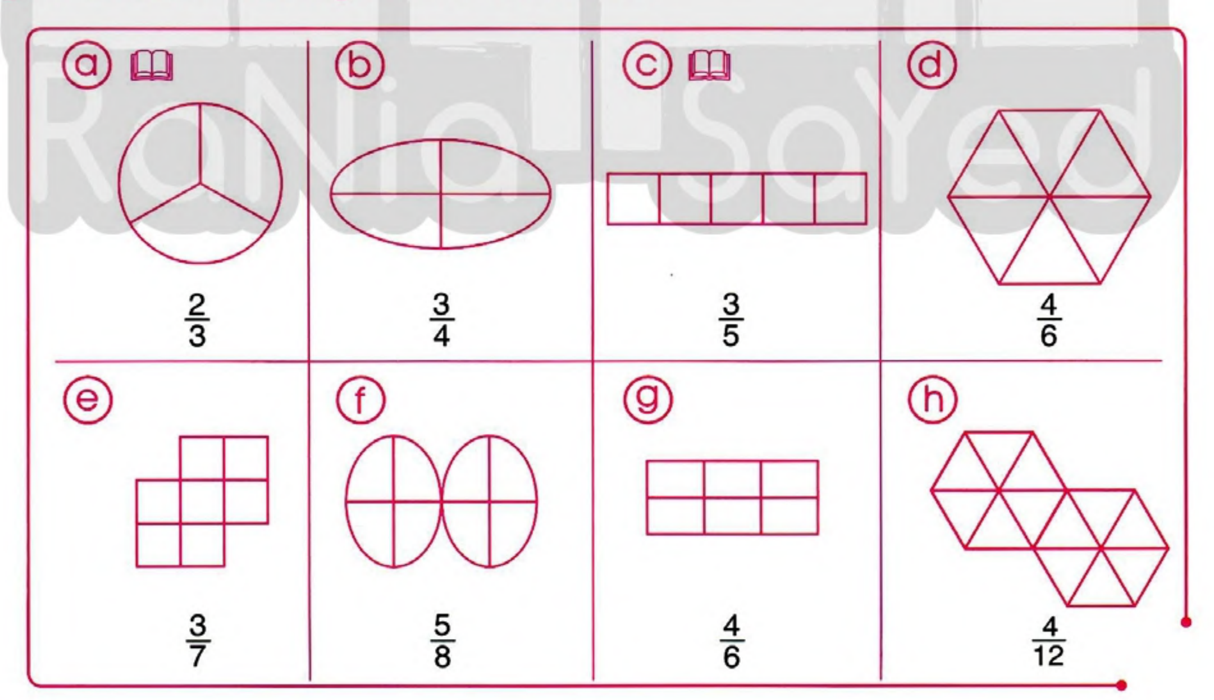


• El-Moasser Exercises

1 Colour according to the fraction :



2 Colour according to the fraction :



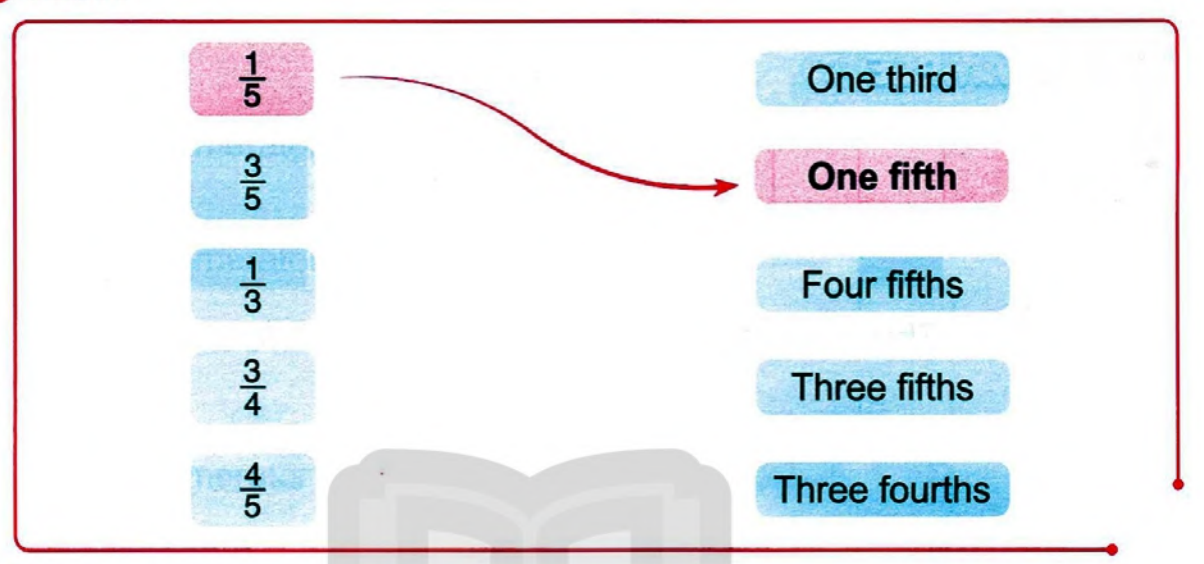




3 Write the fraction according to the coloured part :

(a)	(b) 📖	(c)	(d) 📖
(e)	(f) 📖	(g) 📖	(h)
(i) 📖	(j)	(k) 📖	(l)
(m)	(n)	(o)	(p)

4 Join :



5 Write the following fractions :

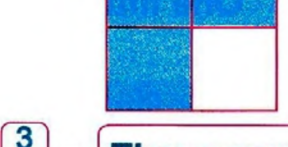
ⓐ 📖 A half = ...	ⓑ 📖 Two thirds = ...
ⓒ A quarter = ...	ⓓ 📖 Four ninths = ...
ⓔ 📖 One eighth = ...	ⓕ Five eighths = ...
ⓖ 📖 Five sixths = ...	ⓗ 📖 Seven eighths = ...
ⓘ 📖 Four sevenths = ...	ⓙ Five fifths = ...
ⓚ Three tenths = ...	ⓛ Six elevenths = ...

6 Write each fraction in words :

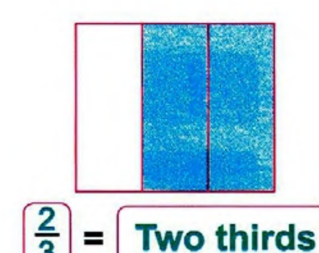
ⓐ $\frac{1}{3}$ = ...	ⓑ $\frac{1}{6}$ = ...	ⓒ $\frac{1}{8}$ = ...
ⓓ $\frac{1}{4}$ = ...	ⓔ $\frac{5}{9}$ = ...	ⓕ $\frac{3}{7}$ = ...
ⓖ $\frac{2}{5}$ = ...	ⓗ $\frac{7}{10}$ = ...	ⓘ $\frac{5}{11}$ = ...
ⓙ $\frac{7}{12}$ = ...	ⓚ $\frac{1}{13}$ = ...	ⓛ $\frac{4}{15}$ = ...

7 Complete as in the example :

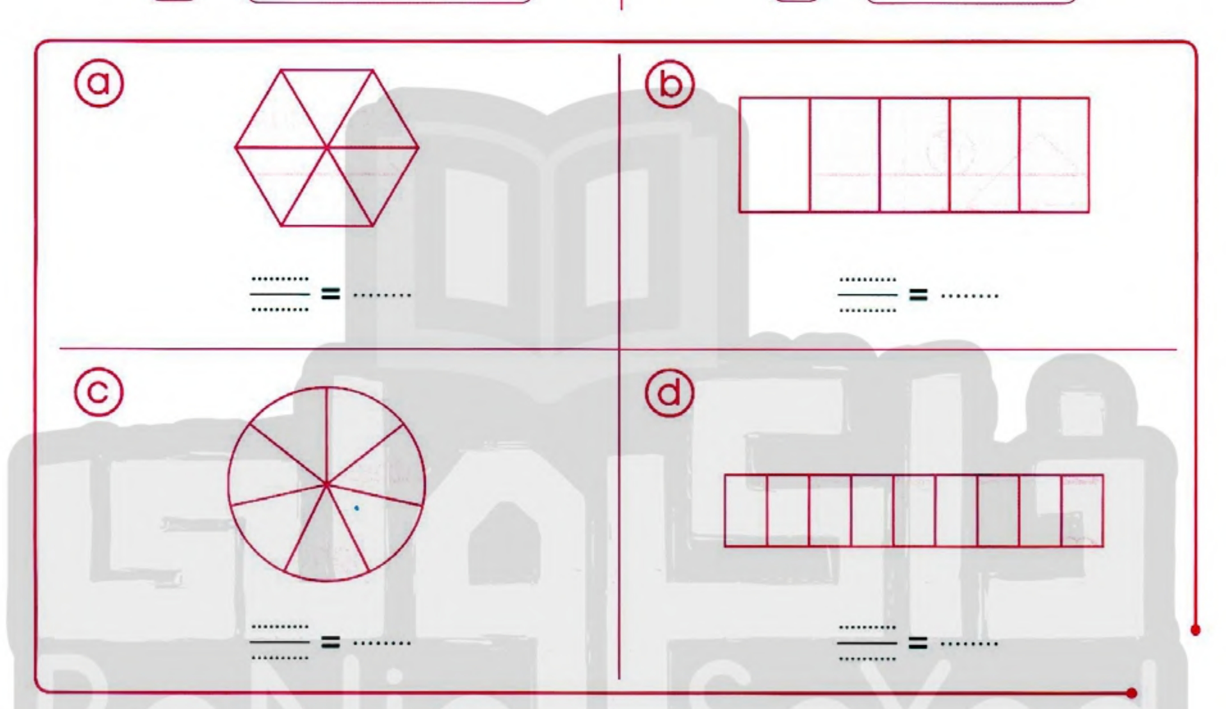




$\frac{3}{4}$ = Three quarters



$\frac{2}{3}$ = Two thirds



ⓐ $\frac{\cdots}{\cdots}$ = ...

ⓑ $\frac{\cdots}{\cdots}$ = ...

ⓒ $\frac{\cdots}{\cdots}$ = ...

ⓓ $\frac{\cdots}{\cdots}$ = ...

8 Complete following the example :

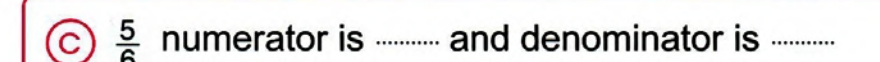


$\frac{1}{2}$ numerator is 1 and denominator is 2

ⓐ $\frac{1}{3}$ numerator is .... and denominator is ....

ⓑ $\frac{3}{4}$ numerator is .... and denominator is ....







(c) $\frac{5}{6}$ numerator is .... and denominator is ....

(d) $\frac{4}{9}$ numerator is .... and denominator is ....

(e) $\frac{2}{11}$ numerator is .... and denominator is ....

9 Complete the following table :

Numerator	Denominator	The fraction is	Read as
1	5	$\frac{1}{5}$	One fifth
2	3	....	....
4	7	....	....
....	....	$\frac{5}{6}$	....
....	....	$\frac{3}{10}$	....
....	....	....	Three eighths
....	....	....	Two ninths

10 Complete :

$$1 = \frac{\dots}{5} = \frac{3}{\dots} = \frac{\dots}{4} = \frac{7}{\dots} = \frac{\dots}{6} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$$

11 How many ?

(a) How many halves in the whole one ? ....

(b) How many thirds in the whole one ? ....





(c) How many quarters (fourths) in the whole one ? ....

(d) How many fifths in the whole one ? ....

(e) How many ninths in the whole one ? ....

(f) How many elevenths in the whole one ? ....

Think And Answer

(a) On a tree , there are 8 birds. If the quarter of these birds fly. How many birds do fly ?

....

(b) I am a fraction. My denominator is 7 and my numerator is less than my denominator by 1

Who am I ?

I am ....







1 Complete each of the following :

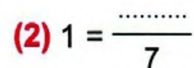
(1) The fraction $\frac{9}{13}$ its numerator is .... and its denominator is ....

(2) $1 = \frac{.........}{7}$

(3) The numbers 119 , 113 , 91 and 221 are called .... numbers.

(4) The perimeter of square of side length = 5 cm. is .... cm.

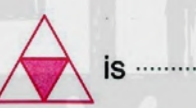
$\frac{.....}{4}$



2 Choose the correct answer :

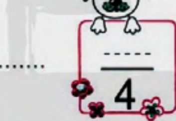
(1) Seven eighths = ... (78 or $\frac{6}{7}$ or 87 or $\frac{7}{8}$)

(2) $31 \times 1\,000 =$ .... (301 or 310 or 31 000 or 3 100)

(3) The fraction that represents the shaded part of  is ....

($\frac{1}{3}$ or $\frac{1}{2}$ or $\frac{1}{5}$ or $\frac{1}{4}$)

(4) $4 \times 235 =$ .... (904 or 940 or 490 or 9 400)



$\frac{.....}{4}$

3 [a] How many :

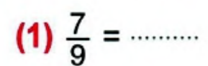
(1) sevenths are there in one whole ? ....

(2) twelveths are there in one whole ? ....

[b] Write the following fractions in words :

(1) $\frac{7}{9}$ = ...

(2) $\frac{3}{8}$ = ...





$\frac{.....}{4}$





4 Complete :

(1) 609 ÷ 3 = ...

(2) 100 × 4 × .... = 2 400

(3) 20 × 70 = ...

(4) The perimeter of a triangle of side lengths are 5 cm. , 6 cm. and 4 cm. = ... cm.



5 Write the fractions representing the shaded and not shaded circles :



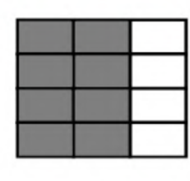
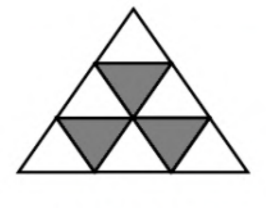
	(8 circles)	(9 circles)
The balls that are shaded	..... /	..... / .....
The balls that are not shaded	..... /	..... / .....



• Zakroly Worksheet on Lesson 1

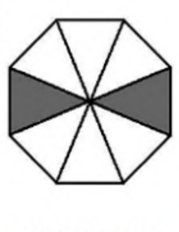
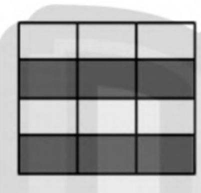
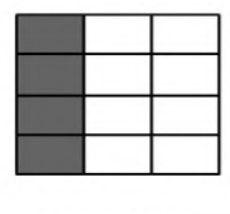
1. Write the Fraction :

a)

....

b)

....

c) Third = ...   Four fifths = ...   Two sevenths = ...

Eighth = ...   Nine tenths = ...   Six sixths = ...

2. Choose the correct answers :

a) How many halves are there in one whole ? ......

(1 - 2 - $\frac{1}{2}$)

b) How many quarters are there in one whole ? ......

(2 - 4 - $\frac{1}{4}$)

c) If the numerator is 3 and the denominator is 7, then fraction = ...

($\frac{7}{3}$ - $\frac{3}{7}$ - 73)





d) If the denominator is 9 and the numerator is 4, then fraction = ...

($\frac{4}{9}$ - $\frac{9}{4}$ - 94)

3. Write fractions in words :

- $\frac{3}{4}$ = ...
- $\frac{2}{7}$ = ...
- $\frac{1}{10}$ = ...
- $\frac{5}{8}$ = ...

4. I am a fraction. If my denominator is 8 and my numerator is half my denominator, then I'm = ...





Equal Fractions

Rule

- **To get a fraction equal to a given fraction, we multiply (or divide) both of numerator and denominator by the same number (other than zero).**

FOR EXAMPLE

$$\frac{1}{2} \xrightarrow{\times 2} = \frac{2}{4} \xrightarrow{\div 2} = \frac{1}{2}$$

- **To reduce (simplify) a fraction to its simplest form, we divide each of the numerator and the denominator by the greatest possible common number.**

$$\frac{14}{21} \xrightarrow{\div 7} = \frac{2}{3}$$





• El-Moasser Exercises

1 Complete each of the following with the help of the following figures :

ⓐ $\frac{1}{2} = \frac{\dots}{4}$

ⓑ $\frac{1}{3} = \frac{\dots}{\dots}$

ⓒ $\frac{\dots}{\dots} = \frac{3}{\dots}$

ⓓ $\frac{1}{4} = \frac{\dots}{\dots}$

ⓔ $\frac{1}{5} = \frac{\dots}{\dots}$

ⓕ $\frac{2}{3} = \frac{\dots}{6}$

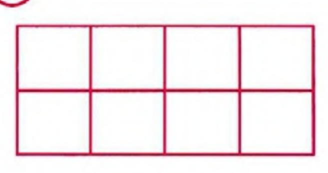
ⓖ $\frac{3}{4} = \frac{6}{\dots}$

ⓗ $\frac{1}{\dots} = \frac{\dots}{\dots}$



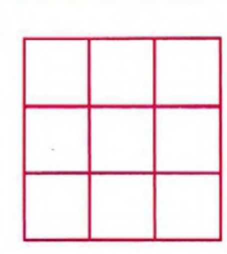


 Colour according to the fraction , then write a fraction equals the given one :

ⓐ

$\frac{1}{2} = \frac{\dots}{\dots}$

ⓑ

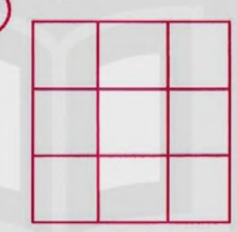
$\frac{1}{2} = \frac{\dots}{\dots}$

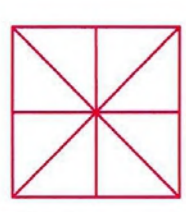
ⓒ

$\frac{1}{3} = \frac{\dots}{\dots}$

ⓓ

$\frac{1}{4} = \frac{\dots}{\dots}$

ⓔ


$\frac{2}{3} = \frac{\dots}{\dots}$

ⓕ

$\frac{3}{4} = \frac{\dots}{\dots}$

3 Complete the missing terms :

ⓐ $\frac{1}{2} = \frac{\dots}{6}$
ⓑ $\frac{2}{3} = \frac{\dots}{12}$
ⓒ $\frac{3}{5} = \frac{\dots}{10}$
ⓓ $\frac{2}{9} = \frac{\dots}{18}$
ⓔ $\frac{5}{8} = \frac{20}{\dots}$
ⓕ $\frac{2}{7} = \frac{12}{\dots}$
ⓖ $\frac{3}{4} = \frac{\dots}{20}$
ⓗ $\frac{5}{6} = \frac{30}{\dots}$
ⓘ $\frac{3}{9} = \frac{\dots}{27}$
ⓙ $\frac{2}{4} = \frac{10}{\dots}$
ⓚ $\frac{4}{6} = \frac{16}{\dots}$
ⓛ $\frac{3}{3} = \frac{\dots}{7}$

4 Complete the missing terms :

ⓐ $\frac{1}{2} = \frac{\dots}{8} = \frac{6}{\dots}$
ⓑ $\frac{1}{3} = \frac{\dots}{6} = \frac{5}{\dots}$
ⓒ $\frac{2}{5} = \frac{\dots}{15} = \frac{8}{\dots}$
ⓓ $\frac{3}{7} = \frac{9}{\dots} = \frac{\dots}{35}$



(e) $\frac{2}{3} = \frac{10}{......} = \frac{......}{9}$

(f) $\frac{5}{6} = \frac{50}{......} = \frac{......}{30}$

(g) $\frac{3}{4} = \frac{18}{......} = \frac{......}{32}$

(h) $\frac{7}{8} = \frac{14}{......} = \frac{......}{56}$

(i) $\frac{4}{9} = \frac{......}{36} = \frac{......}{54}$

(j) $\frac{3}{8} = \frac{15}{......} = \frac{27}{......}$

(k) $\frac{4}{4} = \frac{8}{......} = \frac{20}{......}$

(l) $1 = \frac{5}{......} = \frac{......}{4} = \frac{7}{......}$

(m) $\frac{1}{2} = \frac{3}{6} = \frac{5}{10} = \frac{......}{12} = \frac{......}{14} = \frac{8}{......} = \frac{10}{......} = \frac{......}{......}$

5 In each of the following , write an equal fraction to the given one :

(a) $\frac{1}{5} = \frac{......}{......}$

(b) $\frac{1}{9} = \frac{......}{......}$

(c) $\frac{3}{4} = \frac{......}{......}$

(d) $\frac{2}{7} = \frac{......}{......}$

(e) $\frac{5}{8} = \frac{......}{......}$

(f) $\frac{4}{9} = \frac{......}{......}$

(g) $\frac{6}{7} = \frac{......}{......}$

(h) $\frac{3}{8} = \frac{......}{......}$

(i) $\frac{3}{10} = \frac{......}{......}$

(j) $\frac{6}{11} = \frac{......}{......}$

(k) $\frac{7}{12} = \frac{......}{......}$

(l) $\frac{9}{11} = \frac{......}{......}$

6 Complete each of the following :

(a) $\frac{1}{3} = \frac{......}{......} = \frac{......}{......}$

(b) $\frac{2}{5} = \frac{......}{......} = \frac{......}{......}$

(c) $\frac{5}{9} = \frac{......}{......} = \frac{......}{......}$

(d) $\frac{3}{11} = \frac{......}{......} = \frac{......}{......}$

(e) $\frac{4}{7} = \frac{......}{......} = \frac{......}{......} = \frac{......}{......}$

(f) $\frac{8}{9} = \frac{......}{......} = \frac{......}{......} = \frac{......}{......}$



7 Choose the correct answer :

ⓐ $\frac{4}{5} = \frac{\dots}{10}$ (4 or 6 or 8)

ⓑ $\frac{2}{7} = \frac{18}{\dots}$ (9 or 14 or 63)

ⓒ $\frac{\dots}{24} = \frac{3}{8}$ (6 or 9 or 12)

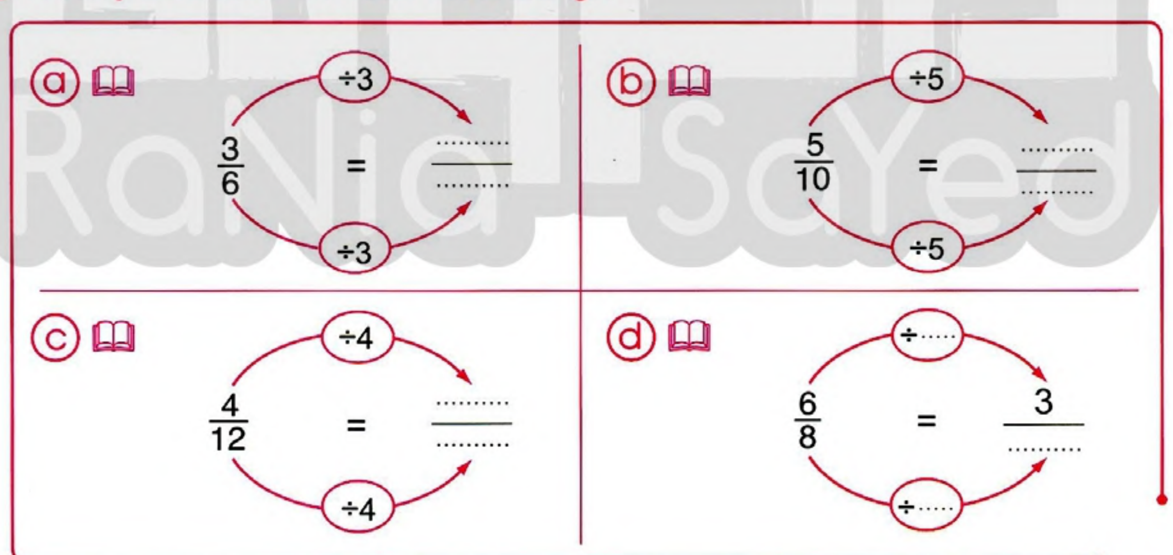
ⓓ $\frac{8}{\dots} = \frac{2}{9}$ (4 or 15 or 36)

ⓔ $\frac{2}{3} = \frac{\dots}{\dots}$ ($\frac{6}{9}$ or $\frac{9}{11}$ or $\frac{9}{15}$)

ⓕ $\frac{1}{2} = \frac{\dots}{\dots}$ ($\frac{3}{6}$ or $\frac{3}{9}$ or $\frac{3}{12}$)

ⓖ $\frac{1}{3} = \frac{\dots}{\dots}$ ($\frac{7}{10}$ or $\frac{9}{10}$ or $\frac{5}{15}$)

8 Complete each of the following :



ⓐ $\frac{3}{6} = \frac{\dots}{\dots}$ (÷3, ÷3)

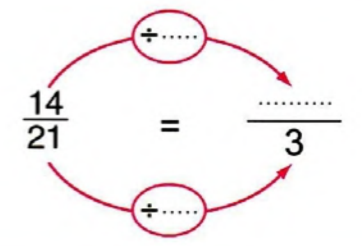
ⓑ $\frac{5}{10} = \frac{\dots}{\dots}$ (÷5, ÷5)

ⓒ $\frac{4}{12} = \frac{\dots}{\dots}$ (÷4, ÷4)

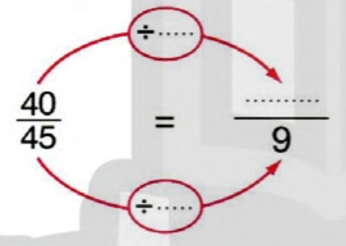
ⓓ $\frac{6}{8} = \frac{3}{\dots}$ (÷...., ÷....)

(e) $\frac{5}{25} = \frac{1}{\dots}$ (÷ ...... above and below)

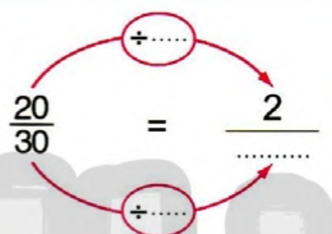
(f) $\frac{6}{9} = \frac{2}{\dots}$ (÷ ...... above and below)



(g) $\frac{7}{21} = \frac{1}{\dots}$ (÷ ...... above and below)



(h) $\frac{14}{21} = \frac{\dots}{3}$ (÷ ...... above and below)



(i) $\frac{40}{45} = \frac{\dots}{9}$ (÷ ...... above and below)

(j) $\frac{20}{30} = \frac{2}{\dots}$ (÷ ...... above and below)

9 Complete the missing terms :

(a) $\frac{5}{10} = \frac{\dots}{2}$

(b) $\frac{6}{8} = \frac{\dots}{4}$

(c) $\frac{15}{25} = \frac{\dots}{5}$

(d) $\frac{16}{20} = \frac{\dots}{10}$

(e) $\frac{9}{27} = \frac{1}{\dots}$

(f) $\frac{7}{70} = \frac{1}{\dots}$

(g) $\frac{18}{27} = \frac{2}{\dots}$

(h) $\frac{30}{36} = \frac{5}{\dots}$

(i) $\frac{12}{18} = \frac{2}{\dots}$

(j) $\frac{24}{48} = \frac{6}{\dots} = \frac{\dots}{2}$

(k) $\frac{4}{10} = \frac{2}{\dots} = \frac{\dots}{15}$

(l) $\frac{2}{\dots} = \frac{10}{15} = \frac{6}{\dots}$

10 Simplify each fraction to its simplest form :

(a) $\frac{4}{12} = \frac{\cdots}{\cdots}$	(b) $\frac{6}{10} = \frac{\cdots}{\cdots}$	(c) $\frac{3}{30} = \frac{\cdots}{\cdots}$
(d) $\frac{12}{14} = \frac{\cdots}{\cdots}$	(e) $\frac{6}{21} = \frac{\cdots}{\cdots}$	(f) $\frac{10}{100} = \frac{\cdots}{\cdots}$
(g) $\frac{18}{30} = \frac{\cdots}{\cdots}$	(h) $\frac{16}{20} = \frac{\cdots}{\cdots}$	(i) $\frac{35}{45} = \frac{\cdots}{\cdots}$
(j) $\frac{28}{49} = \frac{\cdots}{\cdots}$	(k) $\frac{21}{27} = \frac{\cdots}{\cdots}$	(l) $\frac{8}{44} = \frac{\cdots}{\cdots}$
(m) $\frac{36}{66} = \frac{\cdots}{\cdots}$	(n) $\frac{100}{180} = \frac{\cdots}{\cdots}$	(o) $\frac{120}{180} = \frac{\cdots}{\cdots}$

11 Underline the correct answer :

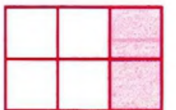
(a) $\frac{14}{21} = \frac{2}{\cdots}$ (2 or 3 or 7)

(b) $\frac{15}{20} = \cdots$ ($\frac{3}{4}$ or $\frac{1}{2}$ or $\frac{3}{5}$ or $\frac{2}{5}$)

(c) $\frac{24}{30} = \cdots$ ($\frac{3}{5}$ or $\frac{4}{6}$ or $\frac{3}{6}$ or $\frac{4}{5}$)

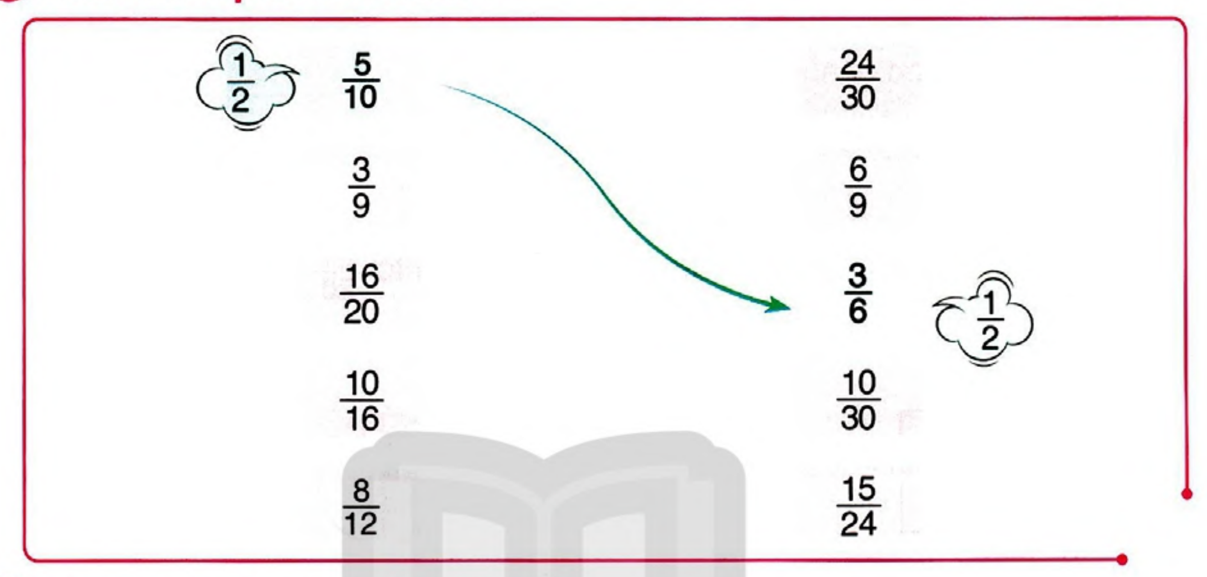
(d) $\frac{16}{24} = \cdots$ ($\frac{2}{3}$ or $\frac{3}{4}$ or $\frac{1}{2}$ or $\frac{2}{8}$)

(e) $\frac{12}{48} = \cdots$ ($\frac{2}{6}$ or $\frac{2}{3}$ or $\frac{6}{8}$ or $\frac{1}{4}$)

(f) The fraction that represents the coloured parts in the shape  is .... ($\frac{2}{3}$ or $\frac{2}{4}$ or $\frac{1}{3}$)



12 Join the equal fractions :



$\frac{5}{10}$	$\frac{24}{30}$
$\frac{3}{9}$	$\frac{6}{9}$
$\frac{16}{20}$	$\frac{3}{6}$
$\frac{10}{16}$	$\frac{10}{30}$
$\frac{8}{12}$	$\frac{15}{24}$

13 Match the equal fractions :

$\frac{3}{4}$	$\frac{1}{2}$	$\frac{14}{21}$	$\frac{4}{14}$
$\frac{7}{14}$	$\frac{15}{20}$	$\frac{2}{7}$	$\frac{2}{3}$

14 Show that every two fractions are equal as in the example :



Example :

$\frac{3}{12}$, $\frac{5}{20}$ Since $\frac{3}{12} = \frac{1}{4}$ and $\frac{5}{20} = \frac{1}{4}$, so $\frac{3}{12} = \frac{5}{20}$

(a) $\frac{4}{8}$, $\frac{5}{10}$ Since $\frac{4}{8}$ = ... and $\frac{5}{10}$ = ... , so $\frac{4}{8} = \frac{.........}{10}$

(b) $\frac{12}{18}$, $\frac{14}{21}$ Since $\frac{12}{18}$ = ... and $\frac{14}{21}$ = ... , so .... = ...

(c) $\frac{25}{35}$, $\frac{45}{63}$ Since $\frac{25}{35}$ = ... and $\frac{45}{63}$ = ... , so .... = ...

(d) $\frac{10}{40}$, $\frac{16}{64}$ Since $\frac{10}{40}$ = ... and $\frac{16}{64}$ = ... = ... , so .... = ...



15 Who am I ?

ⓐ I am a fraction of numerator 3 and is equal to $\frac{18}{24}$

$\frac{18}{24} = \frac{3}{\dots\dots}$ So I am ....

ⓑ I am a fraction of denominator 4 and is equal to $\frac{21}{28}$

$\frac{21}{28} = \frac{\dots\dots}{4}$ So I am ....

ⓒ I am a fraction equal to $\frac{12}{16}$ in its simplest form

$\frac{12}{16} = \frac{\dots\dots}{\dots\dots}$ So I am ....

ⓓ I am a fraction equal to $\frac{30}{50}$ and my denominator is 40

$\frac{30}{50} = \frac{\dots\dots}{5} = \frac{\dots\dots}{40}$ So I am ....

Think And Answer

ⓐ How many eighths are equal to one fourth ?

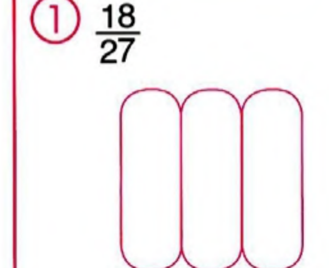
....

ⓑ How many sixths are equal to one third ?

....

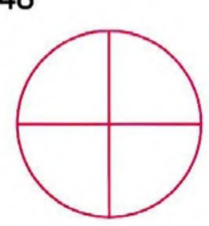
ⓒ In each of the following , colour according to the given fraction :

① $\frac{18}{27}$

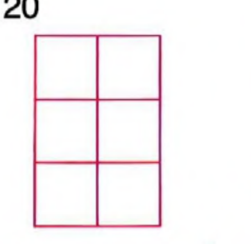


② $\frac{36}{48}$





③ $\frac{100}{120}$







1 **Find the missing terms :**



(1) $\frac{1}{3} = \frac{\cdots}{6} = \frac{5}{\cdots}$

(2) $\frac{2}{5} = \frac{\cdots}{15} = \frac{8}{\cdots}$

(3) $\frac{12}{14} = \frac{\cdots}{7}$

(4) $\frac{15}{20} = \frac{3}{\cdots}$

---

2 **Match the equal fractions :**

(1) $\frac{18}{27}$	(a) $\frac{2}{9}$
(2) $\frac{1}{5}$	(b) $\frac{18}{42}$
(3) $\frac{3}{7}$	(c) $\frac{2}{3}$
(4) $\frac{10}{45}$	(d) $\frac{4}{20}$

---

3 **Choose the correct answer :**



(1) $\frac{5}{6} = \cdots\cdots$ ($\frac{20}{30}$ or $\frac{15}{24}$ or $\frac{15}{30}$ or $\frac{30}{36}$)

(2) $1\,322 \times 4 = \cdots\cdots$ (5 288 or 5 882 or 5 829 or 2 858)

(3) $\frac{6}{18} = \cdots\cdots$ ($\frac{1}{3}$ or $\frac{2}{3}$ or $\frac{3}{6}$ or $\frac{1}{18}$)

(4) 9 tens ÷ 9 = ... (10 or 9 or 1 or 90)

---

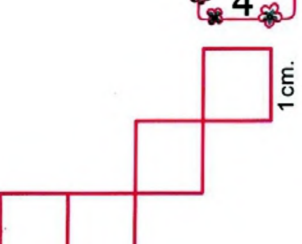
4 **Complete each of the following :**



(1) $\frac{3}{4} = \frac{9}{\cdots}$

(2) The perimeter of the opposite figure

is .... cm. , and its area is .... □



(3) A quarter = ...



5 **[a]** **Shade according to the fraction :**

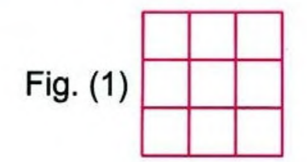


Fig. (1)

Fig. (2)

$\frac{2}{3} = \frac{\cdots}{9}$ $\frac{1}{4} = \frac{\cdots}{8}$



[b] **Simplify :**

(1) $\frac{28}{49} = \frac{\cdots}{\cdots}$

(2) $\frac{30}{35} = \frac{\cdots}{\cdots}$





• Zakroly Worksheet on Lesson 2

1. Complete :

a) $\frac{1}{2} = \frac{.....}{18}$

b) $\frac{5}{7} = \frac{.....}{56}$

c) $\frac{3}{4} = \frac{21}{.....}$

d) $\frac{4}{.....} = \frac{40}{70} = \frac{.....}{.....}$

e) $\frac{18}{20} = \frac{.....}{10}$

f) $\frac{2}{3} = \frac{12}{.....}$

g) $\frac{2}{.....} = \frac{.....}{9}$

h) $\frac{.....}{.....} = \frac{.....}{25} = \frac{50}{.....}$

2. Choose the correct answers :

a) $\frac{2}{3}$ = ... $\left(\frac{10}{12} - \frac{10}{15} - \frac{18}{12} \right)$

b) $\frac{4}{7}$ = ... $\left(\frac{16}{21} - \frac{24}{56} - \frac{28}{49} \right)$

c) $\frac{5}{8}$ = ... $\left(\frac{15}{25} - \frac{25}{40} - \frac{20}{40} \right)$

d) $\frac{2}{9} = \frac{.....}{63}$ (9 – 6 – 14)

3. Simplify :

a) $\frac{15}{20} = \frac{.....}{.....}$

b) $\frac{18}{81} = \frac{.....}{.....}$

c) $\frac{70}{90} = \frac{.....}{.....}$

d) $\frac{36}{63} = \frac{.....}{.....}$

e) $\frac{24}{32} = \frac{.....}{.....}$

f) $\frac{60}{75} = \frac{.....}{.....} = \frac{.....}{.....}$

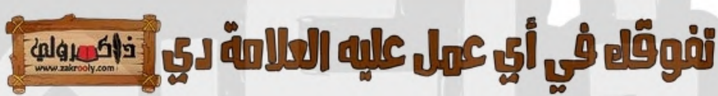


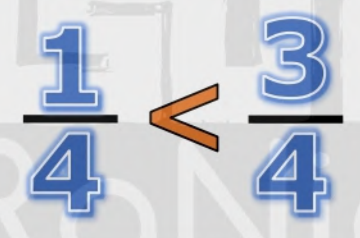
Comparing and Ordering Fractions

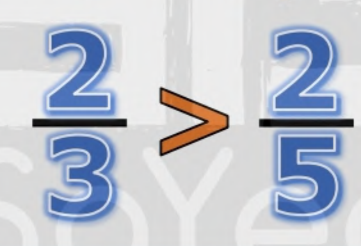
Rule

- To compare between two fractions with the same denominators, compare with their numerators.
  (The fraction with greater numerator is the greater).
- To compare between two fractions with the same numerator, compare with their denominators.
  (The fraction with greater denominator is the smaller).

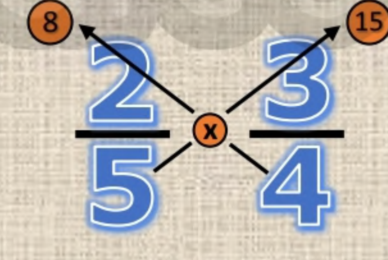
FOR EXAMPLE







- To compare between two different fractions, apply the cross multiplication between them as shown:



$8 < 15$. So, $\frac{2}{5} < \frac{3}{4}$

- **The Ascending Order :**

Small → Great

$\frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}, \frac{5}{6}, 1$

The Descending Order :

Great → Small

$1, \frac{5}{6}, \frac{4}{6}, \frac{3}{6}, \frac{2}{6}, \frac{1}{6}$



• El-Moasser Exercises

1 Complete using (< , = or >) :

ⓐ $\frac{2}{3}$ .... $\frac{1}{3}$

ⓑ $\frac{1}{4}$ .... $\frac{2}{4}$

ⓒ $\frac{4}{6}$ .... $\frac{5}{6}$

ⓓ $\frac{5}{5}$ .... $\frac{3}{5}$

ⓔ $\frac{1}{3}$ .... $\frac{1}{5}$

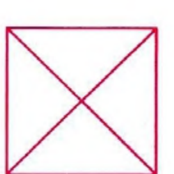
ⓕ $\frac{1}{8}$ .... $\frac{1}{4}$

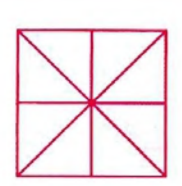
ⓖ $\frac{1}{5}$ .... $\frac{1}{4}$

ⓗ $\frac{1}{3}$ .... $\frac{1}{6}$



(i)

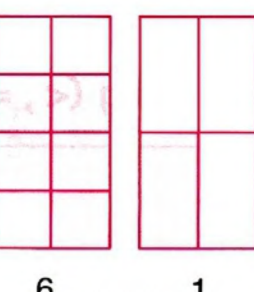




$\frac{1}{4}$ .... $\frac{2}{8}$

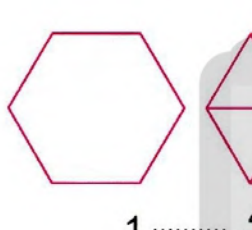
(j)





$\frac{6}{8}$ .... $\frac{1}{4}$

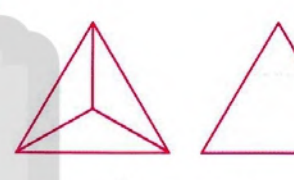
(k)





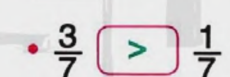
1 .... $\frac{4}{6}$

(l)



$\frac{3}{3}$ 1

2 Complete each of the following using (< , = or >) as in the example :



EXAMPLE :

- $\frac{3}{7} > \frac{1}{7}$
- $\frac{1}{4} < \frac{1}{3}$
- $\frac{1}{2} = \frac{5}{10}$ ($\frac{1}{2}$)

(a) $\frac{1}{5}$ .... $\frac{2}{5}$	(b) $\frac{3}{6}$ .... $\frac{5}{6}$	(c) $\frac{3}{4}$ .... $\frac{1}{4}$
(d) $\frac{7}{8}$ .... $\frac{5}{8}$	(e) $\frac{3}{10}$ .... $\frac{1}{10}$	(f) $\frac{7}{12}$ .... $\frac{11}{12}$
(g) $\frac{9}{11}$ .... $\frac{7}{11}$	(h) $\frac{7}{7}$ .... $\frac{6}{7}$	(i) $\frac{3}{8}$ .... $\frac{2}{8}$
(j) $\frac{1}{6}$ .... $\frac{1}{3}$	(k) $\frac{1}{2}$ .... $\frac{1}{4}$	(l) $\frac{4}{5}$ .... $\frac{4}{4}$
(m) $\frac{1}{2}$ .... $\frac{1}{3}$	(n) $\frac{1}{2}$ .... $\frac{7}{10}$	(o) $\frac{1}{3}$ .... $\frac{4}{6}$
(p) $\frac{3}{3}$ 1	(q) $\frac{4}{5}$ 1	(r) $\frac{2}{5}$ .... $\frac{3}{3}$
(s) 1 .... $\frac{6}{6}$	(t) $\frac{5}{5}$ .... $\frac{2}{2}$	(u) $\frac{5}{7}$ .... $\frac{15}{21}$



3 Circle the greatest fraction as in the example :



Example :

- $\frac{1}{5}$, $\frac{3}{5}$, ($\frac{4}{5}$) , $\frac{2}{5}$
- $\frac{1}{3}$, $\frac{1}{5}$, ($\frac{1}{2}$) , $\frac{1}{4}$
- $\frac{3}{6}$, ($\frac{5}{6}$) , $\frac{2}{12}$, $\frac{2}{6}$ ($\frac{1}{6}$)



ⓐ $\frac{2}{6}$, $\frac{5}{6}$, $\frac{4}{6}$, $\frac{3}{6}$	ⓑ $\frac{5}{7}$, $\frac{2}{7}$, $\frac{6}{7}$, $\frac{3}{7}$
ⓒ $\frac{2}{9}$, $\frac{7}{9}$, $\frac{4}{9}$, $\frac{9}{9}$	ⓓ $\frac{5}{11}$, $\frac{2}{11}$, $\frac{7}{11}$, $\frac{4}{11}$
ⓔ $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{3}$	ⓕ $\frac{4}{5}$, $\frac{2}{5}$, $\frac{1}{5}$, $\frac{6}{10}$
ⓖ $\frac{3}{8}$, $\frac{1}{4}$, $\frac{7}{8}$, $\frac{4}{8}$	ⓗ $\frac{2}{7}$, $\frac{3}{7}$, $\frac{1}{7}$, 1
ⓘ $\frac{1}{6}$, $\frac{1}{5}$, $\frac{1}{7}$, 1	ⓙ $\frac{2}{5}$, $\frac{2}{3}$, $\frac{2}{7}$, $\frac{2}{9}$

4 Arrange each of the following in an ascending order as in the example :



Example :

- $\frac{1}{7}$, $\frac{5}{7}$, $\frac{3}{7}$, $\frac{4}{7}$ **The order is :** $\frac{1}{7}$, $\frac{3}{7}$, $\frac{4}{7}$ **and** $\frac{5}{7}$
- $\frac{1}{2}$, $\frac{1}{6}$, $\frac{1}{9}$, $\frac{1}{3}$ **The order is :** $\frac{1}{9}$, $\frac{1}{6}$, $\frac{1}{3}$ **and** $\frac{1}{2}$
- $\frac{3}{6}$, $\frac{2}{6}$, $\frac{5}{6}$, $\frac{2}{3}$ **The order is :** $\frac{2}{6}$, $\frac{3}{6}$, $\frac{2}{3}$ **and** $\frac{5}{6}$ ($\frac{4}{6}$)

ⓐ $\frac{4}{6}$, $\frac{1}{6}$, $\frac{2}{6}$ The order is : .... , ... and ....

ⓑ $\frac{9}{10}$, $\frac{3}{10}$, $\frac{5}{10}$, $\frac{2}{10}$ The order is : .... , ... , ... and ....

ⓒ $\frac{22}{25}$, $\frac{18}{25}$, $\frac{12}{25}$, $\frac{24}{25}$ The order is : .... , ... , ... and ....

ⓓ $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{7}$, $\frac{1}{5}$ The order is : .... , ... , ... and ....



(e) $\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{5}$, $\frac{1}{4}$ The order is : ……… , ……… , ……… and ………

(f) $\frac{1}{2}$, $\frac{2}{8}$, $\frac{1}{6}$, $\frac{1}{5}$ The order is : ……… , ……… , ……… and ………

(g) $\frac{1}{6}$, $\frac{3}{6}$, $\frac{4}{12}$, $\frac{5}{6}$ The order is : ……… , ……… , ……… and ………

(h) 📖 $\frac{5}{8}$, $\frac{7}{8}$, 1 , $\frac{1}{8}$ The order is : ……… , ……… , ……… and ………

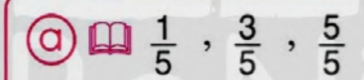
(i) $\frac{3}{3}$, $\frac{1}{2}$, $\frac{1}{7}$, $\frac{1}{4}$ The order is : ……… , ……… , ……… and ………

5 **Arrange each of the following in a descending order as in the example :**



- $\frac{3}{8}$, $\frac{7}{8}$, $\frac{1}{8}$, $\frac{5}{8}$ **The order is :** $\frac{7}{8}$, $\frac{5}{8}$, $\frac{3}{8}$ **and** $\frac{1}{8}$
- $\frac{1}{7}$, $\frac{1}{9}$, $\frac{1}{3}$, $\frac{1}{5}$ **The order is :** $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{7}$ **and** $\frac{1}{9}$
- $\frac{7}{9}$, $\frac{2}{9}$, $\frac{4}{9}$, 1 **The order is :** 1 , $\frac{7}{9}$, $\frac{4}{9}$ **and** $\frac{2}{9}$

($\frac{9}{9}$)



(a) 📖 $\frac{1}{5}$, $\frac{3}{5}$, $\frac{5}{5}$ The order is : ……… , ……… and ………

(b) $\frac{5}{7}$, $\frac{7}{7}$, $\frac{6}{7}$, $\frac{2}{7}$ The order is : ……… , ……… , ……… and ………

(c) $\frac{5}{10}$, $\frac{7}{10}$, $\frac{3}{10}$, $\frac{9}{10}$ The order is : ……… , ……… , ……… and ………

(d) $\frac{1}{7}$, $\frac{1}{9}$, $\frac{1}{6}$, $\frac{1}{10}$ The order is : ……… , ……… , ……… and ………

(e) $\frac{1}{10}$, $\frac{1}{12}$, $\frac{1}{11}$, $\frac{1}{8}$ The order is : ……… , ……… , ……… and ………

(f) 📖 $\frac{2}{9}$, $\frac{7}{9}$, $\frac{5}{9}$, 1 The order is : ……… , ……… , ……… and ………

(g) $\frac{5}{7}$, $\frac{3}{7}$, $\frac{12}{14}$, $\frac{2}{7}$ The order is : ……… , ……… , ……… and ………

(h) $\frac{4}{5}$, $\frac{2}{10}$, $\frac{3}{5}$, 1 The order is : ……… , ……… , ……… and ………



6 Write each of the following :

ⓐ A fraction greater than $\frac{3}{6}$

ⓑ A fraction less than $\frac{4}{5}$

ⓒ A fraction between $\frac{2}{8}$ and $\frac{4}{8}$

ⓓ Two fractions greater than $\frac{1}{2}$

$\frac{1}{2} = \frac{\dots\dots}{6}$ Therefore , the two fractions are and

ⓔ Two fractions smaller than $\frac{1}{2}$

$\frac{1}{2} = \frac{\dots\dots}{6}$ Therefore , the two fractions are and

ⓕ Three fractions smaller than $\frac{1}{2}$

$\frac{1}{2} = \frac{\dots\dots}{8}$ Therefore , the three fractions are , and

ⓖ Two fractions between $\frac{2}{10}$ and $\frac{1}{2}$

$\frac{1}{2} = \frac{\dots\dots}{10}$ Therefore , the two fractions are and

7 Write the fractions in their suitable places on the number line as in the example :





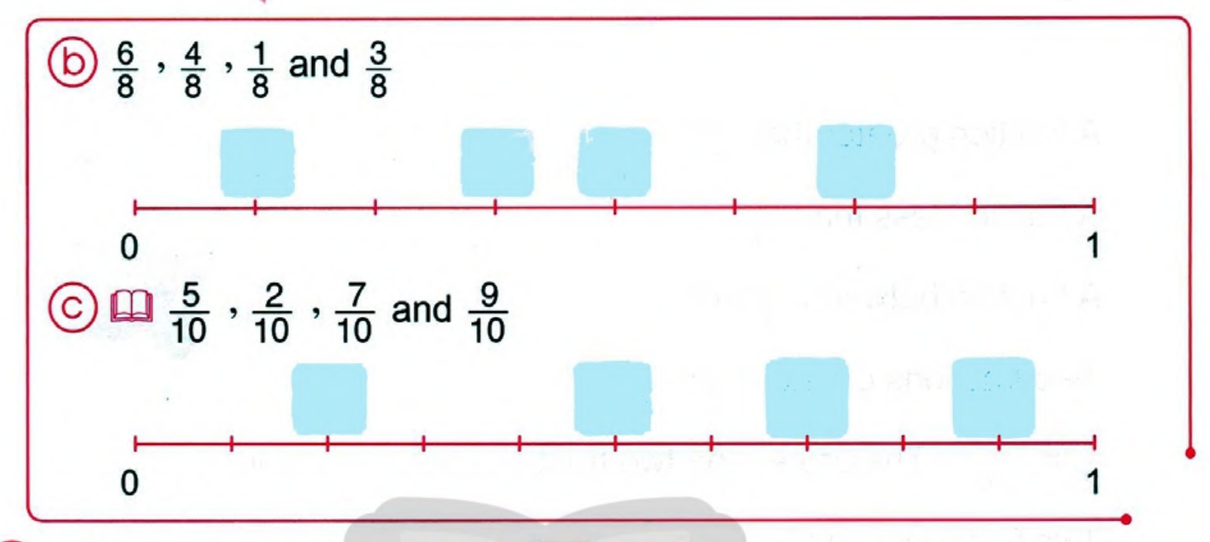
$\frac{2}{5}$ and $\frac{4}{5}$



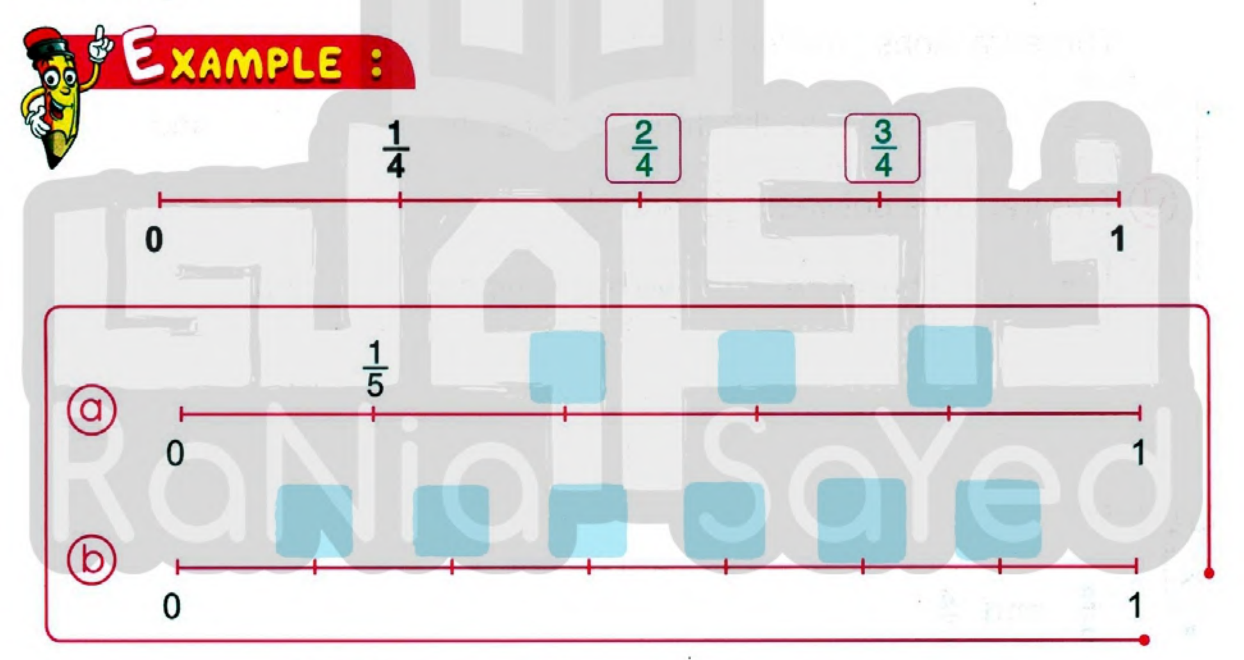
ⓐ $\frac{2}{6}$, $\frac{5}{6}$ and $\frac{3}{6}$

0 1



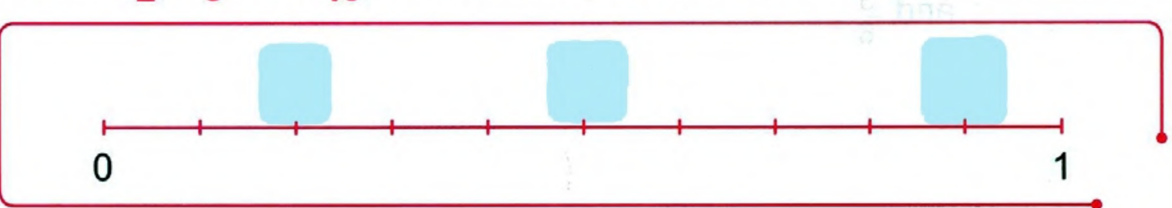


8 Write suitable fractions in ☐ on the number line as in the example :



Think And Answer

Write $\frac{1}{2}$, $\frac{1}{5}$ and $\frac{9}{10}$ in their suitable places on the number line :









1 **Put the suitable relation (<) , (=) or (>) :**

(1) $\frac{7}{9}$ ☐ $\frac{5}{9}$ (2) $\frac{5}{11}$ ☐ $\frac{6}{11}$

(3) $\frac{11}{12}$ ☐ 1 (4) $\frac{1}{5}$ ☐ $\frac{1}{4}$



2 **Complete each of the following :**

(1) 3 ⟌183 ....

(2) The number of the even numbers included between 10 and 20 is ....

(3) The perimeter of the opposite shape = ... units.



(4) Perimeter of rectangle = (........ + ...) × 2

4

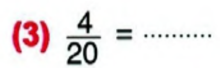
3 **Choose the correct answer :**

(1) 45 ÷ 5 = ... (9 or 7 or 8 or 6)

(2) $\frac{1}{13}$ > .... ($\frac{1}{11}$ or $\frac{1}{12}$ or $\frac{1}{14}$ or $\frac{1}{10}$)

(3) $\frac{4}{20}$ = ... ($\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{1}{5}$ or $\frac{1}{7}$)

(4) The smallest odd number is .... (0 or 1 or 2 or 3)



4

4 **Arrange the following fractions in an ascending order :**

$\frac{3}{10}$, 1 , $\frac{2}{10}$ and $\frac{9}{10}$

The order is : ....





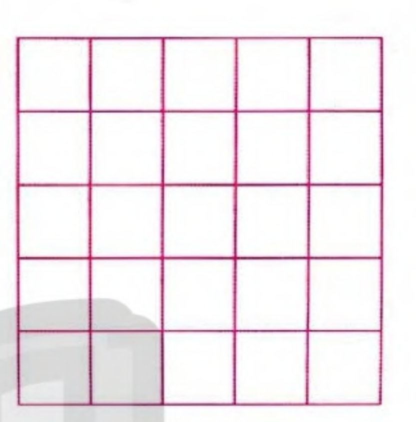


5 On the opposite lattice :

Draw the square XYZL in which XY = 3 cm. and calculate its perimeter and its area.

(1) Its perimeter = ... cm.

(2) Its area = ...









• Zakroly Worksheet on Lesson 3

1. Put >, <, or = :

a. $\frac{5}{9}$ ☐ $\frac{3}{9}$

b. $\frac{1}{6}$ ☐ $\frac{1}{2}$

c. $\frac{4}{12}$ ☐ $\frac{1}{3}$

d. $\frac{24}{56}$ ☐ $\frac{12}{18}$

e. $\frac{1}{4}$ ☐ 1

f. $\frac{3}{5}$ ☐ $\frac{5}{8}$

g. $\frac{4}{7}$ ☐ $\frac{2}{5}$

h. $\frac{3}{3}$ ☐ $\frac{7}{7}$

2. Arrange in an ascending and descending order :

a) $\frac{3}{5}$, $\frac{1}{5}$, $\frac{4}{5}$, 1 , $\frac{4}{10}$

Ascending Order ..... , ... , ... , ... , ...

Descending Order ..... , ... , ... , ... , ...

b) $\frac{2}{6}$, $\frac{2}{9}$, $\frac{2}{7}$, $\frac{2}{5}$, $\frac{2}{11}$

Ascending Order ..... , ... , ... , ... , ...

Descending Order ..... , ... , ... , ... , ...

c) $\frac{1}{4}$, $\frac{1}{7}$, $\frac{2}{6}$, $\frac{1}{8}$, 1

Ascending Order ..... , ... , ... , ... , ...

Descending Order ..... , ... , ... , ... , ...





Adding and Subtracting Fractions

Rule

- To add two fractions, add the nominators, and then put the same denominator.
- To subtract two fractions, subtract the nominators, and then put the same denominator.

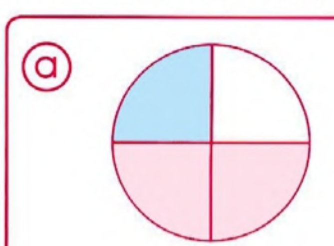
FOR EXAMPLE

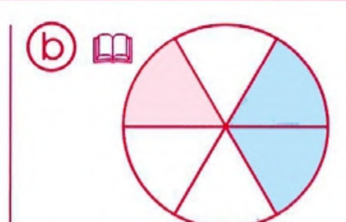
$$\frac{2}{7} + \frac{3}{7} = \frac{5}{7} \qquad \frac{6}{8} - \frac{5}{8} = \frac{1}{8}$$

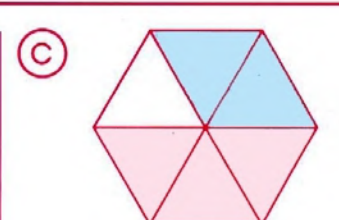


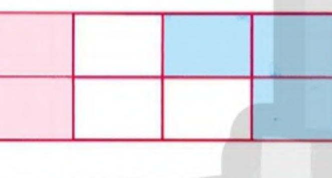
• El-Moasser Exercises

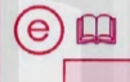
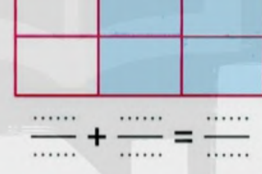
1 Look at the shapes and complete :

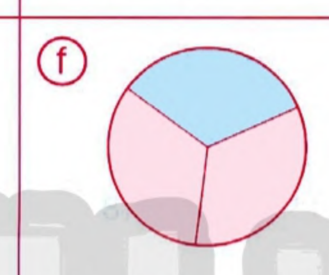
ⓐ

$\frac{1}{4} + \frac{2}{4} = \frac{\dots}{4}$

ⓑ

$\frac{1}{6} + \frac{2}{6} = \frac{\dots}{\dots}$

ⓒ

$\frac{2}{6} + \frac{3}{6} = \frac{\dots}{\dots}$

ⓓ

$\frac{2}{8} + \frac{3}{8} = \frac{\dots}{\dots}$

ⓔ


$\frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots}$

ⓕ

$\frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots} = \dots$

2 Add :

ⓐ $\frac{3}{7} + \frac{1}{7} = \frac{\dots}{\dots}$

ⓑ $\frac{1}{5} + \frac{2}{5} = \frac{\dots}{\dots}$

ⓒ $\frac{1}{3} + \frac{1}{3} = \frac{\dots}{\dots}$

ⓓ $\frac{1}{9} + \frac{7}{9} = \frac{\dots}{\dots}$

ⓔ $\frac{3}{8} + \frac{2}{8} = \frac{\dots}{\dots}$

ⓕ $\frac{4}{6} + \frac{1}{6} = \frac{\dots}{\dots}$

ⓖ $\frac{5}{11} + \frac{4}{11} = \frac{\dots}{\dots}$

ⓗ $\frac{4}{15} + \frac{7}{15} = \frac{\dots}{\dots}$

ⓘ $\frac{2}{10} + \frac{7}{10} = \frac{\dots}{\dots}$

ⓙ $\frac{1}{8} + \frac{2}{8} + \frac{4}{8} = \frac{\dots}{\dots}$

ⓚ $\frac{4}{10} + \frac{3}{10} + \frac{2}{10} = \frac{\dots}{\dots}$

ⓛ $\frac{1}{11} + \frac{1}{11} + \frac{3}{11} = \frac{\dots}{\dots}$





3 Add and simplify the sum to its simplest form :

ⓐ $\frac{1}{8} + \frac{3}{8} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓑ $\frac{2}{9} + \frac{1}{9} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓒ 📖 $\frac{5}{12} + \frac{3}{12} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓓ $\frac{2}{15} + \frac{4}{15} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓔ $\frac{5}{18} + \frac{3}{18} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓕ $\frac{7}{20} + \frac{7}{20} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓖ 📖 $\frac{1}{4} + \frac{3}{4} = \frac{.....}{.....} =$ ....

ⓗ 📖 $\frac{5}{9} + \frac{4}{9} = \frac{.....}{.....} =$ ....

ⓘ 📖 $\frac{1}{2} + \frac{1}{2} = \frac{.....}{.....} =$ ....

ⓙ $\frac{4}{14} + \frac{2}{14} + \frac{1}{14} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓚ $\frac{5}{18} + \frac{1}{18} + \frac{6}{18} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓛ $\frac{2}{9} + \frac{3}{9} + \frac{4}{9} = \frac{.....}{.....} =$ ....

4 Subtract and simplify the result to its simplest form :

ⓐ 📖 $\frac{4}{5} - \frac{1}{5} = \frac{.....}{.....}$

ⓑ 📖 $\frac{5}{6} - \frac{4}{6} = \frac{.....}{.....}$

ⓒ 📖 $\frac{4}{9} - \frac{2}{9} = \frac{.....}{.....}$

ⓓ 📖 $\frac{3}{11} - \frac{1}{11} = \frac{.....}{.....}$

ⓔ 📖 $\frac{5}{8} - \frac{3}{8} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓕ $\frac{8}{10} - \frac{6}{10} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓖ $\frac{11}{15} - \frac{6}{15} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓗ $\frac{5}{6} - \frac{1}{6} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓘ $\frac{11}{12} - \frac{2}{12} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓙ $\frac{16}{25} - \frac{6}{25} = \frac{.....}{.....} = \frac{.....}{.....}$

ⓚ $1 - \frac{4}{5} = \frac{5}{5} - \frac{4}{5} = \frac{.....}{.....}$

ⓛ 📖 $1 - \frac{1}{3} = \frac{.....}{.....} - \frac{.....}{.....} = \frac{.....}{.....}$

ⓜ $1 - \frac{1}{2} = \frac{.....}{.....} - \frac{.....}{.....} = \frac{.....}{.....}$

ⓝ $\frac{5}{9} - \frac{0}{9} = \frac{.....}{.....}$

ⓞ $\frac{4}{11} - \frac{4}{11} = \frac{.....}{.....} =$ ....

ⓟ $\frac{4}{10} - \frac{2}{5} =$ ....





5 Join the equal results :

$\frac{2}{5} + \frac{1}{5}$	$\frac{7}{8} - \frac{1}{8}$
$\frac{5}{9} + \frac{1}{9}$	$\frac{4}{5} - \frac{1}{5}$
$\frac{4}{8} + \frac{2}{8}$	$\frac{8}{9} - \frac{2}{9}$
$\frac{3}{10} + \frac{2}{10}$	$\frac{9}{10} - \frac{1}{10}$
$\frac{2}{5} + \frac{2}{5}$	$1 - \frac{1}{2}$



6 Put "< , = or >" :

ⓐ $\frac{6}{7} - \frac{2}{7}$ .... $\frac{1}{7} + \frac{3}{7}$

ⓑ $\frac{3}{7} + \frac{2}{7}$ .... $\frac{3}{4} + \frac{1}{4}$

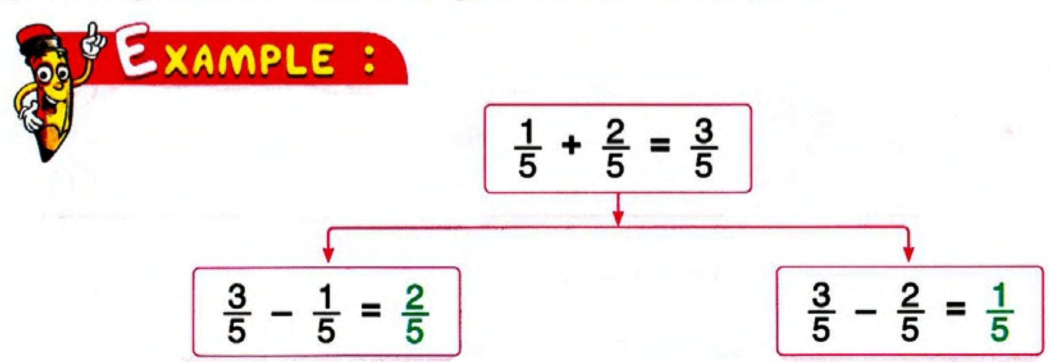
ⓒ $1 - \frac{4}{5}$ .... $\frac{2}{5}$

ⓓ $1 - \frac{2}{5}$ .... $\frac{3}{5}$

ⓔ $\frac{3}{6} + \frac{2}{6}$ .... $1 - \frac{5}{6}$

ⓕ $\frac{4}{9} + \frac{2}{9}$ .... $\frac{5}{6} - \frac{1}{6}$

7 Complete the following as in the example :



$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

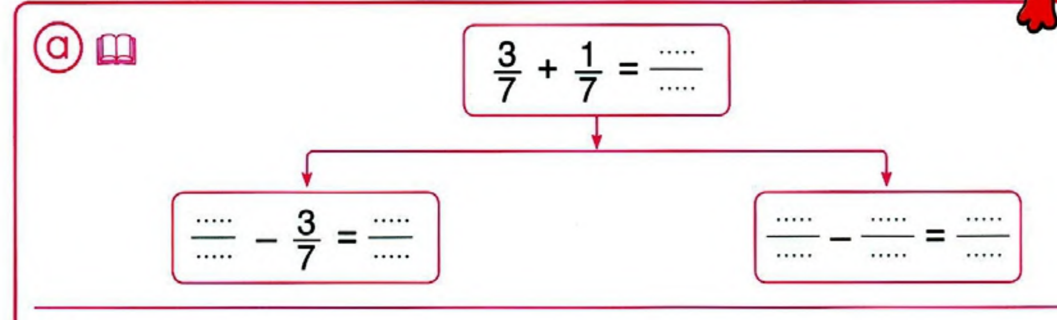
$\frac{3}{5} - \frac{1}{5} = \frac{2}{5}$

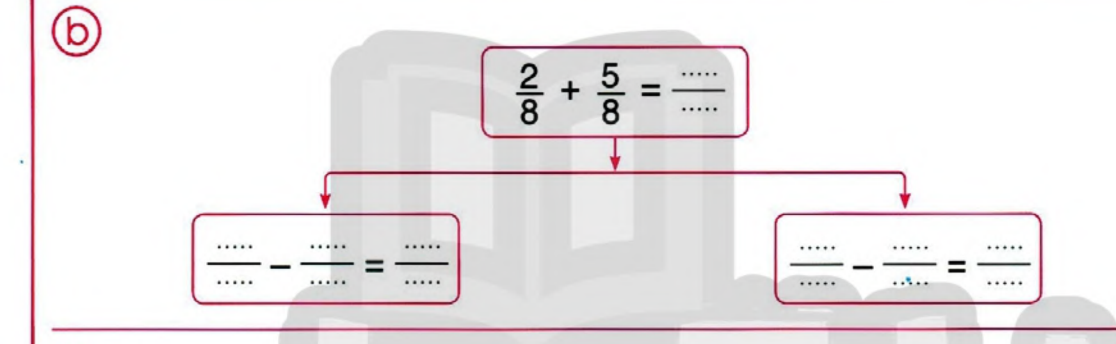
$\frac{3}{5} - \frac{2}{5} = \frac{1}{5}$

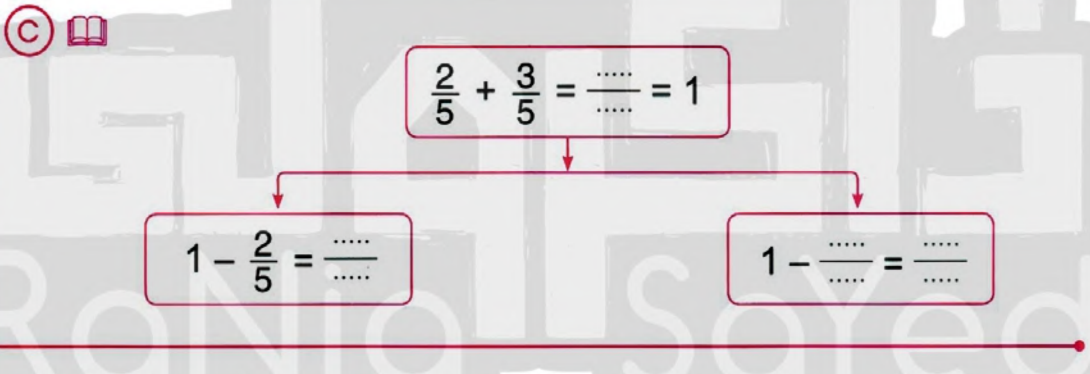












8 **Complete as in the following example :**

EXAMPLE :

- $\frac{3}{7} + \frac{.....}{.....} = \frac{5}{7}$ The answer : $\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$
- $\frac{.....}{.....} + \frac{1}{6} = \frac{5}{6}$ The answer : $\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$

ⓐ $\frac{7}{9} + \frac{.....}{.....} = \frac{8}{9}$ The answer :



ⓑ $\frac{5}{12} + \frac{\cdots}{\cdots} = \frac{9}{12}$ The answer :

ⓒ $\frac{3}{5} + \frac{\cdots}{\cdots} = 1$ The answer :

ⓓ 📖 $\frac{\cdots}{\cdots} + \frac{1}{3} = \frac{2}{3}$ The answer :

ⓔ $\frac{\cdots}{\cdots} + \frac{4}{9} = \frac{8}{9}$ The answer :

ⓕ $\frac{\cdots}{\cdots} + \frac{5}{8} = 1$ The answer :

9 Complete as in the following example :



Example :

- $\frac{7}{8} - \frac{\cdots}{\cdots} = \frac{3}{8}$ **The answer :** $\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$
- $\frac{\cdots}{\cdots} - \frac{2}{9} = \frac{4}{9}$ **The answer :** $\frac{4}{9} + \frac{2}{9} = \frac{6}{9}$

ⓐ $\frac{9}{10} - \frac{\cdots}{\cdots} = \frac{3}{10}$ The answer :

ⓑ 📖 $\frac{3}{5} - \frac{\cdots}{\cdots} = \frac{2}{5}$ The answer :

ⓒ 📖 $\frac{4}{7} - \frac{\cdots}{\cdots} = \frac{1}{7}$ The answer :

ⓓ $1 - \frac{\cdots}{\cdots} = \frac{3}{10}$ The answer :

ⓔ 📖 $\frac{\cdots}{\cdots} - \frac{3}{4} = \frac{1}{4}$ The answer :

ⓕ 📖 $\frac{\cdots}{\cdots} - \frac{1}{6} = \frac{1}{6}$ The answer :

ⓖ $\frac{\cdots}{\cdots} - \frac{5}{8} = \frac{1}{4}$ The answer :



10 Complete each of the following :

ⓐ $\frac{2}{9} + \frac{4}{9} + \frac{\cdots}{\cdots} = 1$

ⓑ $\frac{3}{13} + \frac{2}{13} + \frac{\cdots}{\cdots} = \frac{9}{13}$

ⓒ $\frac{3}{8} + \frac{\cdots}{\cdots} + 1 = 2$

ⓓ $\frac{5}{7} + \frac{1}{7} - \frac{\cdots}{\cdots} = \frac{2}{7}$

ⓔ $\frac{3}{12} + \frac{4}{12} - \frac{\cdots}{\cdots} = \frac{5}{12}$

ⓕ $\frac{5}{9} + \frac{2}{9} - \frac{\cdots}{\cdots} =$ zero

Word Problems

ⓐ

Noha divided a cake into equal 8 pieces.

She ate three pieces and her brother ate two pieces.

What is the fraction of the eaten parts ?

The eaten parts = ... = ... parts.



ⓑ

In the morning , Amal walks $\frac{1}{4}$ km. In the evening , she walks $\frac{3}{4}$ km. How long does she walk ?

She walks = ... = ... = ... km.



ⓒ

One day , $\frac{1}{8}$ of the pupils in a class were absent and $\frac{2}{8}$ of the pupils were on a trip.

What is the fraction of the pupils who were present ?

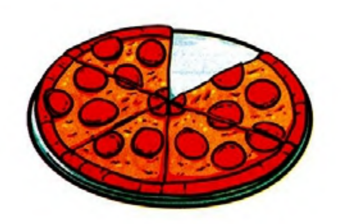
The fraction of the present pupils = ... = ...





(d) Magda ate $\frac{4}{10}$ of a pizza for lunch and $\frac{1}{10}$ of it for dinner. What is the fraction of the left part (in the simplest form) ?

The left part = ... = ...



Think And Answer

(a) Write :

① Write two fractions whose sum is 1 .... and ....

② Write two fractions such that the difference between them is $\frac{2}{7}$

.... and ....

(b) Find each of the following :

① $\frac{2}{10} + \frac{1}{5} = \frac{\cdots}{\cdots} + \frac{\cdots}{\cdots} = \frac{\cdots}{\cdots}$

② $\frac{3}{8} + \frac{1}{4} = \frac{\cdots}{\cdots} + \frac{\cdots}{\cdots} = \frac{\cdots}{\cdots}$

③ $\frac{1}{2} - \frac{2}{6} = \frac{\cdots}{\cdots} - \frac{\cdots}{\cdots} = \frac{\cdots}{\cdots}$





1 Find the result of each of the following :

(1) $\frac{9}{14} + \frac{4}{14} = \dots\dots$

(2) $\frac{8}{11} - \frac{5}{11} = \dots\dots$

(3) $\frac{10}{45} + \frac{18}{45} + \frac{17}{45} = \dots\dots$

(4) $1 - \frac{9}{13} = \dots\dots$



---

2 Complete each of the following :

(1) The even number just after 103 is ....

(2) 250 ÷ 5 = ...

(3) 3 pounds = ... piastres.

(4) $\dots\dots - \frac{1}{6} = \frac{1}{6}$

---

3 Choose the correct answer :

(1) Six elevenths = ... $(\frac{6}{10}$ or $\frac{6}{11}$ or $\frac{6}{12}$ or $\frac{6}{13})$

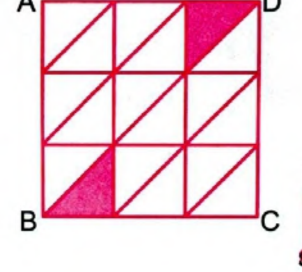
(2) $1 - \frac{4}{6} = \frac{1}{6} + \dots\dots$ $(\frac{1}{6}$ or $\frac{2}{6}$ or $\frac{6}{6}$ or $\frac{5}{6})$

(3) $\frac{2}{5} = \dots\dots$ $(\frac{3}{10}$ or $\frac{1}{5} + \frac{2}{5}$ or $\frac{16}{20}$ or $1 - \frac{3}{5})$

(4) $(\frac{2}{5} + \frac{1}{5})$ .... four fifths ($>$ or $=$ or $<$)







4 ***In the opposite figure :***

ABCD is a square in which AB = 3 cm.

Complete :



(1) The perimeter of the square = ... cm.

(2) The area of the square = ... ◺

(3) The two equal fractions for shaded parts of the whole figure are ....

and ....

5 **[a]** ***Arrange the following in a descending order :***

$\frac{1}{8}$, $\frac{7}{8}$, $\frac{5}{8}$ and $\frac{3}{8}$

The order is : ...., ..., ... and ....



[b] ***What is the number that if multiplied by 615***

, then the result will be 615 000 ?

The number = ...



• Zakroly Worksheet on Lesson 4

1. Complete :

a. $\frac{3}{7} + \frac{2}{7} =$ .....

e. $\frac{1}{6} +$ ..... $= \frac{1}{6}$

b. $\frac{5}{9} - \frac{2}{9} =$ ..... = ...

f. ..... $- \frac{3}{5} = \frac{1}{5}$

c. $1 - \frac{3}{8} =$ .....

g. ..... $- \frac{1}{8} = \frac{1}{4}$

d. $\frac{2}{3} +$ ..... = 1

h. $\frac{5}{13} + \frac{3}{13} + \frac{1}{13} =$ .....

2. Put >, <, or = :

a. $1 - \frac{1}{6}$ ☐ $\frac{2}{6} + \frac{3}{6}$

e. $\frac{1}{3} + \frac{1}{3}$ ☐ $\frac{1}{2}$

b. $\frac{2}{7} + \frac{4}{7}$ ☐ $\frac{2}{5} + \frac{3}{5}$

f. $1 - \frac{6}{10}$ ☐ $\frac{4}{5} - \frac{1}{5}$

c. $\frac{1}{4} + \frac{2}{8}$ ☐ $\frac{7}{8} - \frac{3}{8}$

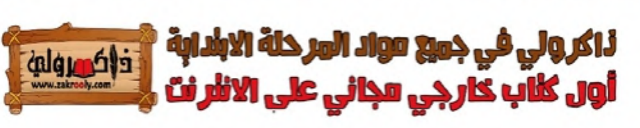
g. $\frac{2}{9} + \frac{1}{3}$ ☐ 7 ninths

d. $\frac{9}{11} - \frac{7}{11}$ ☐ $\frac{2}{5} + \frac{1}{5}$

h. $\frac{4}{8} + \frac{3}{6}$ ☐ 1

3. Malak divided a pizza into 8 equal pieces. She ate 3 pieces and her sister ate 2 pieces. What is the fraction of left pieces ?

The fraction = ...

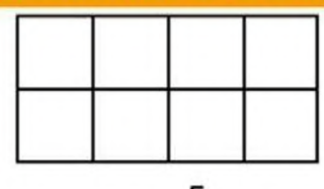






• School Book Exercises on Unit 3

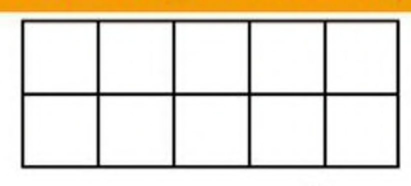
(1) Colour the parts that represent the fraction written under each shape:



$\frac{5}{8}$

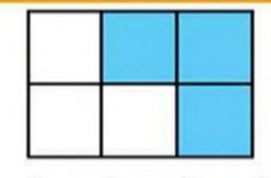


$\frac{2}{3}$

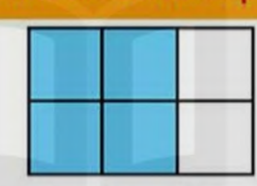


$\frac{2}{5}$

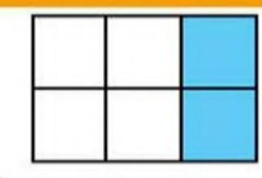
(2) Circle the fraction that represents the coloured part in each of the following shapes:



$\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{2}$



$\frac{3}{6}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$



$\frac{1}{3}$, $\frac{2}{3}$, $\frac{2}{4}$, $\frac{3}{4}$

(3) Complete:

$\frac{1}{5} + \frac{2}{5} = \frac{......}{......}$, $\frac{2}{7} = \frac{6}{......}$, $\frac{8}{9} - \frac{5}{9} =$ ....

$\frac{6}{10} = \frac{3}{......}$, $1 - \frac{5}{8} =$ .... , $\frac{6}{16} = \frac{......}{2}$

(4) Circle what each of the following fractions equals:

(a) $\frac{3}{5}$ $\left(\frac{1}{5} + \frac{3}{5} \quad , \quad \frac{6}{20} \quad , \quad 1 - \frac{2}{5}\right)$

(b) $\frac{2}{3}$ $\left(\frac{6}{9} \quad , \quad \frac{9}{11} \quad , \quad \frac{9}{15}\right)$

(c) $\frac{6}{7}$ $\left(\frac{3}{7} + \frac{3}{7} \quad , \quad \frac{9}{14} , \frac{12}{15}\right)$




(5) Complete using one of the signs < , = or >:

$\frac{5}{8}$ ☐ $\frac{7}{8}$ $\frac{2}{3}$ ☐ 1

$\frac{11}{13}$ ☐ $\frac{7}{13}$ 1 ☐ $\frac{7}{7}$

(6) Order the following fractions ascendingly and descendingly:

$\frac{1}{10}$, $\frac{3}{10}$, $\frac{2}{10}$, $\frac{9}{10}$

Ascending order: .... , ... , ... , ...

Descending order: .... , ... , ... , ...

(7) Choose the correct answer

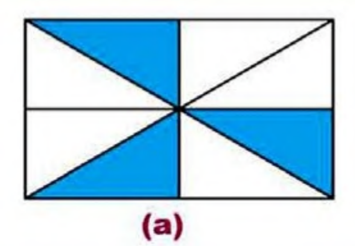
(a) $\frac{15}{25} = \frac{......}{5}$ (3, 5, 7)

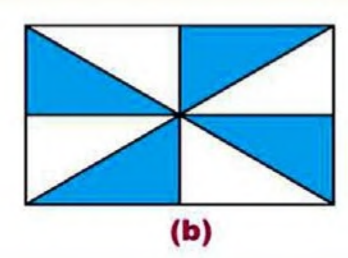
(b) Which the following fraction whose represent the whole one ....

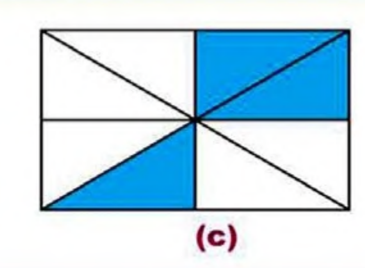
($\frac{4}{4}$, $\frac{4}{3}$, $\frac{1}{4}$)

(c) $\frac{5}{9}$ ☐ $\frac{6}{9}$ (> , < , =)

(8) Which of the following shapes represent half?


(a)


(b)


(c)



• School Book Activities on Unit 3

(1) Complete the following addition table::

+	$\frac{1}{7}$	$\frac{4}{7}$	$\frac{3}{7}$
$\frac{2}{7}$	$\frac{3}{7}$	....	....
$\frac{1}{7}$	....	....	....
....	....	1	....

(2)

(a) What is the fraction that gives the result $\frac{3}{5}$ if $\frac{2}{5}$ is added to it?

(b) What is the fraction that gives one whole if $\frac{3}{4}$ is added to it

(c) What is the fraction that gives the result $\frac{3}{9}$ if subtracted from $\frac{4}{9}$?

(d) What is the fraction that gives $\frac{3}{9}$ if $\frac{4}{9}$ is subtracted from it?





(3) Express the following in fractions:

(a) A box of cheese contains 8 equal pieces - what is each piece in relation to the whole box?

....

(b) A pie was divided equally among four friends- what is each one`s share?

....

(c) A piece of land was divided into 5 equal pieces. One of the pieces was planted cotton. Two pieces were planted wheat and the other two pieces were planted rice. What does each of the following represent in relation to the original piece of land:

Land planted cotton : ....

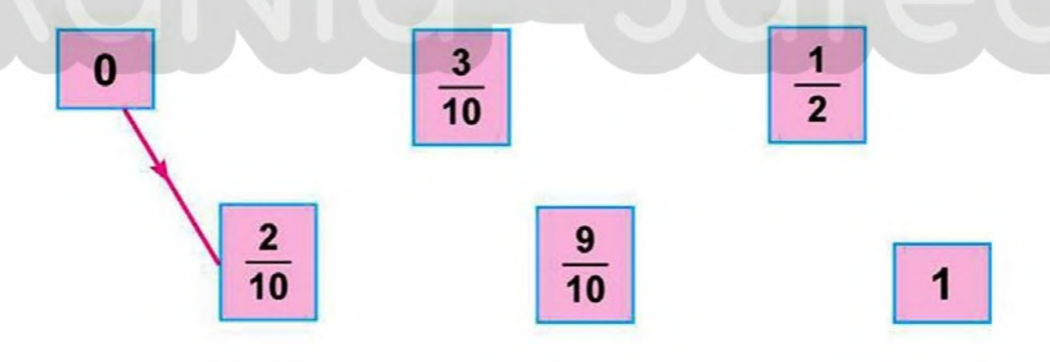
Land planted wheat: ....

Land planted rice: ....

(d) A class has 36 pupils. 8 pupils went on a trip what is the fraction that represents the number of pupils that went on the trip in relation to the number of pupils in the class?

$\frac{3}{8}$ $\frac{2}{9}$ $\frac{1}{18}$ $\frac{1}{4}$

(4) Complete drawing the arrows so that each arrow goes from the smallest to the greatest:





• Zakroly Test On Unit 3

1. Choose the correct answers :

a) 3 sixths + 2 sixths = ... (1 - $\frac{5}{6}$ - $\frac{2}{3}$)

b) $1 - \frac{1}{7}$ ☐ $\frac{3}{7} + \frac{2}{7}$ (> - < - =)

c) $\frac{36}{72} = \frac{.....}{.....}$ ($\frac{1}{2}$ - $\frac{1}{3}$ - $\frac{1}{4}$)

d) $\frac{1}{3} + \frac{2}{9} + \frac{4}{9}$ = ... ($\frac{7}{9}$ - $\frac{5}{9}$ - 1)

2. Arrange in an ascending and descending order :

$\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, 1 , $\frac{1}{8}$, $\frac{7}{8}$

Ascending Order ..... , ... , ... , ... , ... , ...

Descending Order ..... , ... , ... , ... , ... , ...

3. Complete :

a) $\frac{1}{4} = \frac{.....}{16}$

c) $\frac{130}{200} = \frac{.....}{20}$

b) $\frac{3}{6} + \frac{2}{6} = \frac{.....}{.....}$

d) $1 - \frac{.....}{.....} = \frac{3}{5}$

4. Ahmed had L.E. 1 and he bought a pen for L.E. $\frac{3}{4}$. How much money was left with him ?

The left money = ... L.E.